**Amendments to the Claims**

Claim 1 (Currently amended): A process for producing ~~HFC-227ea~~ $CF_3CFHCF_3$ comprising ~~the steps of~~:

~~(a)~~ contacting a C-3 ~~reactants~~ reactant ~~selected for the group consisting of aliphatic, olefinic, or partially halogenated hydrocarbons having at least three carbon atoms,~~ comprising one or more of perhydrogenated or partially halogenated C-3 hydrocarbons with $Cl_2$ and HF in the presence of a ~~metal containing~~ first catalyst at a ~~sufficient~~ first temperature to form ~~perhalogenated compounds~~ a C-3 product comprising a C-3 perhalogenated compound;

~~(b)~~ contacting the ~~perhalogenated compounds~~ C-3 product with HF in the presence of a ~~metal containing~~ second catalyst at a ~~sufficient~~ second temperature to form ~~CFC-216aa~~ $CF_3CCl_2CF_3$;

~~(c)~~ contacting the ~~CFC-216aa~~ $CF_3CCl_2CF_3$ with HF in the presence of a ~~metal containing~~ third catalyst at a ~~sufficient~~ third temperature to form ~~CFC-217ba~~ $CF_3CClFCF_3$; and

~~(d)~~ contacting the ~~CFC-217ba~~ $CF_3CClFCF_3$ with $H_2$ in the presence of a ~~metal containing~~ fourth catalyst at a ~~sufficient~~ fourth temperature to produce ~~HFC-227ea~~ $CF_3CFHCF_3$.

Claim 2 (Original): The process of claim 1 wherein the first temperature is at least about 150°C, the second temperature is at least about 300°C, the third temperature is at least about 200°C and the fourth temperature is at least about 30°C.

Claim 3 (Original): The process of claim 2 wherein the first temperature is from about 150°C to about 450°C, the second temperature is from about 300°C to about 550°C, the third temperature is from about 200°C to about 550°C and the fourth temperature is from about 30°C to about 275°C.

Claim 4 (Currently amended): The process of claim 3 wherein the first temperature is at least about 220°C, the second temperature is at least about 470°C, the third temperature is at least about 470°C and the fourth temperature is at least about 185°C.

Claim 5 (Currently amended): The process of claim 1 wherein ~~the~~ , during the contacting of the C-3 reactant with the HF and the $Cl_2$, a molar ratio of ~~HF:$Cl_2$ used in step (a)~~ the HF to the $Cl_2$ is from about 0.75:1 to about 8:1.

Claim 6 (Currently amended): The process of claim 5 wherein ~~the~~ , during the contacting of the C-3 reactant with the HF and the $Cl_2$, a molar ratio of ~~HF:$Cl_2$ used in step (a)~~ the HF to the $Cl_2$ is at least about 4:1.

Claim 7 (Currently amended): The process of claim 1 wherein ~~the~~ , during the contacting of the C-3 reactant with the HF and the $Cl_2$, a molar ratio of the $Cl_2$ to the C-3 ~~reactants used in step (a)~~ reactant is from about 8:1 to about 10:1.

Claim 8 (Currently amended): The process of claim 7 wherein ~~the~~ , during the contacting of the C-3 reactant with the HF and the $Cl_2$, a molar ratio of the $Cl_2$ to the C-3 ~~reactants used in step (a)~~ reactant is at least about 8.2:1.

Claim 9 (Currently amended): The process of claim 1 wherein ~~the~~ , during the contacting of the C-3 reactant with the HF and the $Cl_2$, a molar ratio of the HF to the C-3 ~~reactants used in step (a)~~ reactant is from about 6:1 to about 64:1.

Claim 10 (Currently amended): The process of claim 9 wherein ~~the~~ , during the contacting of the C-3 reactant with the HF and the $Cl_2$, a molar ratio of the HF to the C-3 ~~reactants used in step (a)~~ reactant is at least about 35:1.

Claim 11 (Currently amended): The process of claim 1 wherein ~~the~~ , during the contacting of the C-3 product with the HF, a molar ratio of the HF to ~~perhalogenated compounds used in step (b)~~ the C-3 product is from about 6:1 to about 64:1.

Claim 12 (Currently amended): The process of claim 11 wherein ~~the~~ , during the contacting of the C-3 product with the HF, a molar ratio of the HF to ~~perhalogenated compounds in step (b)~~ the C-3 product is at least about 30:1.

Claim 13 (Currently amended): The process of claim 1 wherein ~~the~~ , during the contacting of the $CF_3CCl_2CF_3$ with the HF, a molar ratio of the HF to ~~CFC-216aa used in step (c)~~ the $CF_3CCl_2CF_3$ is from about 1:1 to about 30:1.

Claim 14 (Currently amended): The process of claim 13 wherein ~~the~~ , during the contacting of the $CF_3CCl_2CF_3$ with the HF, a molar ratio of the HF to ~~CFC-216aa used in step (c)~~ the $CF_3CCl_2CF_3$ is at least about 10:1.

Claim 15 (Currently amended): The process of claim 1 wherein ~~the~~ , during the contacting of the $CF_3CClFCF_3$ with the $H_2$, a molar ratio of the $H_2$ to ~~CFC-217ba used in step (d)~~ the $CF_3CClFCF_3$ is from about 0.2:1 to about 10:1.

Claim 16 (Currently amended): The process of claim 15 wherein ~~the~~ , during the contacting of the $CF_3CClFCF_3$ with the $H_2$, a molar ratio of the $H_2$ to ~~CFC-217ba used in step (d)~~ the $CF_3CClFCF_3$ is at least about 1.2:1.

Claim 17 (Currently amended): The process of claim 1 further comprising ~~the addition of water in step (d)~~ , during the contacting of the $CF_3CClFCF_3$ with $H_2$, contacting the fourth catalyst with water.

Claim 18 (Currently amended): The process of claim 17 wherein the water is present in an amount from about 0.04 to about 12 percent by weight of the ~~$C_3ClF_7$~~ $CF_3CClFCF_3$.

Claim 19 (Currently amended): The process of claim 18 wherein the ~~water~~ amount is about 0.8 percent by weight of the ~~CFC-217ba~~ $CF_3CClFCF_3$.

Claim 20 (Currently amended): The process of claim 1 further comprising ~~the addition of $Cl_2$ in step (b)~~ , during the contacting of the C-3 product with HF, contacting the C-3 product with $Cl_2$.

Claim 21 (Currently amended): The process of claim 1 wherein the ~~metal containing~~ first catalyst ~~of step (a)~~ comprises chromium and a catalyst support.

Claim 22 (Currently amended): The process of claim 1 wherein the ~~metal-containing~~ second catalyst ~~of step (b)~~ comprises chromium and a catalyst support.

Claim 23 (Currently amended): The process of claim 1 wherein the ~~metal-containing~~ third catalyst ~~of step (c)~~ comprises chromium and a catalyst support.

Claim 24 (Currently amended): The process of claim 1 wherein the ~~metal-containing~~ fourth catalyst ~~of step (d)~~ comprises ~~Pd~~ palladium and a catalyst support.

Claim 25 (Currently amended): The process of claim 1 further comprising ~~the addition of diluent in at least one of steps (a)-(d)~~ , during the contacting of the C-3 reactant with HF and $Cl_2$, contacting the C-3 reactant with a diluent.

Claim 26 (Currently amended): The process of claim 1 wherein, ~~in at least one of steps (a)-(c), underfluorinated products are recycled to at least one of steps (a)-(c)~~ the C-3 product further comprises a halogenation by-product and, during the contacting of the C-3 reactants with the $Cl_2$ and the HF, the C-3 reactants further comprises the halogenation by-product.

Claims 27-38 (Cancelled).

Claim 39 (Currently amended): A process for producing ~~HFC-227ea~~ $CF_3CFHCF_3$ comprising ~~the steps of~~:

~~(a)~~ contacting a C-3 ~~reactants selected for the group consisting of aliphatic, olefinic, or partially halogenated hydrocarbons having at least three carbon atoms,~~ reactant comprising one or more of perhydrogenated and partially halogenated C-3 hydrocarbons with $Cl_2$ and HF in the presence of a ~~metal containing~~ first catalyst at a ~~sufficient~~ first temperature to form ~~perhalogenated compounds~~ a C-3 product comprising a C-3 perhalogenated compound; and

~~(b)~~ contacting the ~~perhalogenated compounds~~ C-3 product with HF in the presence of a ~~metal containing~~ second catalyst at a ~~sufficient~~ second temperature to form ~~CFC-217ba~~ $CF_3CClFCF_3$;

~~(c)~~ contacting the ~~CFC-217ba~~ $CF_3CClFCF_3$ with $H_2$ in the presence of a ~~metal containing~~ third catalyst at a ~~sufficient~~ third temperature to form ~~HFC-227ea~~ $CF_3CFHCF_3$.

Claim 40 (Original): The process of claim 39 wherein the first temperature is at least about 150°C, the second temperature is at least about 200°C, and the third temperature is at least about 30°C.

Claim 41 (Original): The process of claim 40 wherein the first temperature is from about 150°C to about 300°C, the second temperature is from about 200°C to about 550°C, and the third temperature is from about 30°C to about 275°C.

Claim 42 (Currently amended): The process of claim 41 wherein the first temperature is at least about 220°C, the second temperature is at least about 470°C, and the third temperature is at least about 185°C.

Claim 43 (Currently amended): The process of claim 39 wherein ~~the~~ , during the contacting of the C-3 reactant with the $Cl_2$ and the HF, a molar ratio of ~~HF:$Cl_2$ used in step (a)~~ the HF to the $Cl_2$ is from about 0.75:1 to about 8:1.

Claim 44 (Currently amended): The process of claim 43 wherein ~~the~~ , during the contacting of the C-3 reactant with the $Cl_2$ and the HF, a molar ratio of ~~HF:$Cl_2$ used in step (a)~~ the HF to the $Cl_2$ is at least about 4:1.

Claim 45 (Currently amended): The process of claim 39 wherein ~~the~~ , during the contacting of the C-3 reactant with the $Cl_2$ and the HF, a molar ratio of the $Cl_2$ to the C-3 ~~reactants used in step (a)~~ reactant is from about 8:1 to about 10:1.

Claim 46 (Currently amended): The process of claim 45 wherein ~~the~~ , during the contacting of the C-3 reactant with the $Cl_2$ and the HF, a molar ratio of the $Cl_2$ to the C-3 ~~reactants used in step (a)~~ reactant is at least about 8.2:1.

Claim 47 (Currently amended): The process of claim 39 wherein ~~the~~ , during the contacting of the C-3 reactant with the $Cl_2$ and the HF, a molar ratio of the HF to the C-3 ~~reactants used in step (a)~~ reactant is from about 6:1 to about 64:1.

Claim 48 (Currently amended): The process of claim 47 wherein ~~the~~ , during the contacting of the C-3 reactant with the $Cl_2$ and the HF, a molar ratio of the HF to the C-3 ~~reactants used in step (a)~~ reactant is at least about 35:1.

Claim 49 (Currently amended): The process of claim 39 wherein ~~the~~ , during the contacting of the C-3 product with the HF, a molar ratio of the HF to ~~perhalogenated compounds used in step (b)~~ the C-3 product is from about 6:1 to about 64:1.

Claim 50 (Currently amended): The process of claim 49 wherein the , during the contacting of the C-3 product with the HF, a molar ratio of the HF to ~~perhalogenated compounds in step (b)~~ the C-3 product is at least about 30:1.

Claim 51 (Currently amended): The process of claim 39 wherein ~~the~~ , during the contacting of the $CF_3CClFCF_3$ with the $H_2$, a molar ratio of ~~HF~~ the $H_2$ to the ~~CFC-217ba~~ $CF_3CClFCF_3$ ~~used in step (c)~~ is from about 0.2:1 to about 10:1.

Claim 52 (Currently amended): The process of claim 51 wherein ~~the~~ , during the contacting of the $CF_3CClFCF_3$ with the $H_2$, a molar ratio of the $H_2$ to the ~~CFC-217ba~~ $CF_3CClFCF_3$ ~~used in step (c)~~ is at least about 1.2:1.

Claim 53 (Currently amended): The process of claim 39 further comprising ~~the addition of water in step (c)~~, during the contacting of the $CF_3CClFCF_3$ with the $H_2$, contacting the third catalyst with water.

Claim 54 (Currently amended): The process of claim 53 wherein the water is present in an amount from about 0.04 to about 12 percent by weight of the ~~CFC-217ba~~ $CF_3CClFCF_3$.

Claim 55 (Currently amended): The process of claim 54 wherein the ~~water~~ amount is about 0.8 percent by weight of the ~~CFC-217ba~~ $CF_3CClFCF_3$.

Claim 56 (Currently amended): The process of claim 39 further comprising ~~the addition of $Cl_2$ in step (b)~~, during the contacting of the C-3 product with HF, contacting the C-3 product with $Cl_2$.

Claim 57 (Currently amended): The process of claim 39 wherein the ~~metal-containing~~ first catalyst ~~of step (a)~~ comprises chromium and a catalyst support.

Claim 58 (Currently amended): The process of claim 39 wherein the ~~metal-containing~~ second catalyst of step (b) comprises chromium and a catalyst support.

Claim 59 (Currently amended): The process of claim 39 wherein the ~~metal-containing~~ third catalyst ~~of step (c)~~ comprises ~~Pd~~ palladium and a catalyst support.

Claim 60 (Currently amended): The process of claim 39 further comprising ~~the addition of diluent in at least one of steps (a) (b)~~, during the contacting of the C-3 reactant with $Cl_2$ and HF, contacting the C-3 reactant with a diluent.

Claim 61 (Currently amended): The process of claim 39 wherein, ~~in at least one of steps (a)-(b), underfluorinated products are recycled to at least one of steps (a)-(b)~~ the C-3 product further comprises a halogenation by-product and, during the contacting of the C-3 reactant with the $Cl_2$ and the HF, the C-3 reactant further comprises the halogenation by-product.

Claims 62-88 (Cancelled).

Claim 89 (New): The process of claim 1 further comprising, during the contacting of the C-3 product with the HF, contacting the C-3 product with a diluent.

Claim 90 (New): The process of claim 1 further comprising, during the contacting of the $CF_3CCl_2CF_3$ with the HF, contacting the $CF_3CCl_2CF_3$ with a diluent.

Claim 91 (New): The process of claim 1 further comprising, during the contacting of the $CF_3CClFCF_3$ with the $H_2$, contacting the $CF_3CClFCF_3$ with a diluent.

Claim 92 (New): The process of claim 1 wherein the contacting of the $CF_3CCl_2CF_3$ with the HF also forms a halogenation exchange by-product and, during the contacting of the C-3 product with HF, the C-3 product further comprises the halogenation exchange by-product.

Claim 93 (New): The process of claim 92 wherein the halogenation exchange by-product comprises one or more of $CF_3CCl_2CF_3$, $CF_3CF_2CF_3$, and $C_3F_5Cl_3$.

Claim 94 (New): The process of claim 1 wherein the contacting of the $CF_3CCl_2CF_3$ with the HF also forms halogenation exchange by-product and, during the contacting of the C-3 reactant with $Cl_2$ and HF, the C-3 reactant further comprises the halogenation exchange by-product.

Claim 95 (New): The process of claim 94 wherein the halogenation exchange by-product comprises one or more of $CF_3CCl_2CF_3$, $CF_3CF_2CF_3$, and $C_3F_5Cl_3$.

Claim 96 (New): The process of claim 1 wherein the first and the second catalysts comprise the same material.

Claim 97 (New): The process of claim 1 wherein the first and the second catalyst comprise the same material as the third catalyst.

Claim 98 (New): The process of claim 39 further comprising, during the contacting of the C-3 product with the HF, contacting the C-3 product with a diluent.

Claim 99 (New): The process of claim 39 further comprising, during the contacting of the $CF_3CClFCF_3$ with the $H_2$, contacting the $CF_3CClFCF_3$ with a diluent.

Claim 100 (New): The process of claim 39 wherein the contacting of the C-3 product with the HF also forms a halogenation exchange by-product and, during the contacting of the C-3 reactant with $Cl_2$ and HF, the C-3 reactant further comprises the halogenation exchange by-product.

101 (New): The process of claim 100 wherein the halogenation exchange by-product comprises one or more of $CF_3CCl_2CF_3$, $CF_3CF_2CF_3$, and $C_3F_5Cl_3$.

Claim 102 (New): The process of claim 39 wherein the first and the second catalysts comprise the same material.

Claim 103 (New): The process of claim 39 wherein the first and the second catalyst comprise the same material as the third catalyst.